Chapter 5.

THE IMPACT OF GLOBAL FINANCIAL CRISIS ON SERBIAN BANKING SECTOR – THE NBS RESPONSE

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Abstract

This paper presents a set of measures and instruments which National Bank of Serbia has taken to prevent or at least ease the effects of global financial crisis on national financial system and support confidence in Serbian banking sector during the last two years. It describes the main drivers of global financial crisis and recognize their indirect impact on Serbian economy. Our aim was to recognize effectiveness of NBS monetary policy in maintaining financial stability as one of the potential guidelines and guarantees for the further development of Serbian banking sector. We found out that NBS activated both conventional and non-conventional measures and instruments of policy under Vienna Initiative and in relation to the arrangement with IMF. All these measures were very successful if we take in consideration that NBS was running last five years anti-cyclical policy and given that there were no serious liquidity problems and capital adequacy ratio for whole banking system is beyond required minimum even under performed stress tests.

Key words: NBS, Crisis, Banks, Financial Markets, Monetary Policy, Financial Stability, Confidence, Liquidity, Capital

1. The building up the crisis on the global level

„The sudden manifestation of the crisis in 2007 was the result of two important fundamental macroeconomic imbalances that persisted for too long; one, the monetary policy of the FED Reserve in the Greenspan era and second, the growing global imbalances. Both these factors were clear precusors of unsustainable bubbles, which were ignored in general because of the pre-crisis phase of high global growth with low inflation[3]“.

The global financial markets changed drastically after the colapse of Lehman Brothers in September 2008. Market participants became increasingly cautious about taking counterparty risk, causing trading volume to decrease sharply and market liquidity to decline significantly. Credit spreads widened and the prices of financial products, including securitized products plunged. Consequently, financial institutions experienced business difficulties or failed one after another in many countries, thereby aggravating financial system concern. Credit provisions from financial institutions to firms and households declined markedly, leading to a global credit contraction. „Confidence, which is the most crucial element in the financial system and markets to function smoothly, was virtually lost“[4].

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[4] Yamaguchi H. (2009), "Some remarks on the financial crisis over the past year", Speech at the 4th Annual Euromoney Japan Capital Markets Congress, Tokyo, 18 September 2009.

Meanwile economic conditions deteriorated simultaneously and rapidly around the globe. This deterioration, together with a spread of anxiety among firms and households, exacerbated the malfunctioning of the financial system, an in turn deteriorated economic conditions further, causing a downward spiral.

Recent reports by the Committee on the Global Financial System (CGFS) an the G20[5] have discussed, among other things, the link between domestic financial development in emerging economies and financial stability in the light of the ongoing financial crisis. Both publications have remarked that limited progress in financial innovation has implied, as a welcome indirect by-product, very limited exposures of emerging economies to sub-prime mortgage markets. As a result, emerging financial markets were able to retain the confidence of international investors in the early stages of the cirsis, and until summer 2008 suffered from limited spillover effects from the financial turmoil occurring in advanced economies. However, when the crisis intensified in mid-September 2008, factors such as global deleveraging, the sudden evaporation of market liquidity and flight to safety had a major impact on emerging financial markets, but these markets proved to be overall more resilient than in past crisis episodes.

Leverage

Use of leverage merged as the sure means to maximize income in the US economy. American household and corporate debt had increased significantly before the crisis. Numerous recent studies have highlighted how the size of households debt and house prices moved together in the US, and every increase in house prices induced futher growth in debt for consumption purpose. The wealth effect of asset price increases, thus, seemed to be much more significant than what was perceived earlier by the policy makers. Correction in asset prices, thus, led to an intense deleveraging process. Asset prices and leverage represent two important variables that must be constantly monitored, as risk from both of them to the financial system could be significant[6]. "But to an extent, leverage was a symptom rather than a cause of the undrelying crisis. In my opinion, the root cause of the problems was the underpricing of risk as the financial sector interacted with nonfinancial sectors[7].

Deterioration in credit standards

The deterioration in credit standards facilitated by the sustained ease monetary policy stance (Anna J. Schwartz, 2008) and deregulation induced opportunity for shifting of credit risk through securitisation, contributed to growth in credit to sub-segments (Laurent Clerc, 2008). It is often agrued that easy access to liquidity alone could not have led to deterioration in credit standards[8]. Securitisation and innovations (structured products and credit derivatives) linked to such securities opened up the option to shift credit risk in sub-prime loans to the markets and thereby free the pressure on bank's capital, which in turn led to the significant weaking in standards for credit assessment[9].

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5 See CGFS (2009), "Capital flows and emerging marekt economies", report submitted by a working group established by the CGFS, CGFS Papers, No. 33 (January); and G20 (2008), "Study group on Global Credit Market Disruptions", paper prepared by Australia.

6 Shin H.S. and Tobias A. (2007), Liquidity and Leverage, working paper, FRB New York and Princeton University

7 Kohn L.D. (2009): Comments ond "Financial Intermediation and the Post-Crisis Financial System", At the 8th BIS Annual Conference 2009, Financial System and Macroeconomic Resilience: Basel, Switzerland

8 "Banks spured the US sub-prime mortgage cirsis by offering excessively risky loans to borrowers and selling the bad loans to other lenders", found Purnanandam A. in a recent University of Michigan study (2008).

9 See Ivanović P. (2009): "Banks and Securitization", Presentation on 8th International Seminar for Bankers and Financial Experts (Banking Management), Miločer, Montenegro, in organization of CISEF Ljubljana, Slovenia,

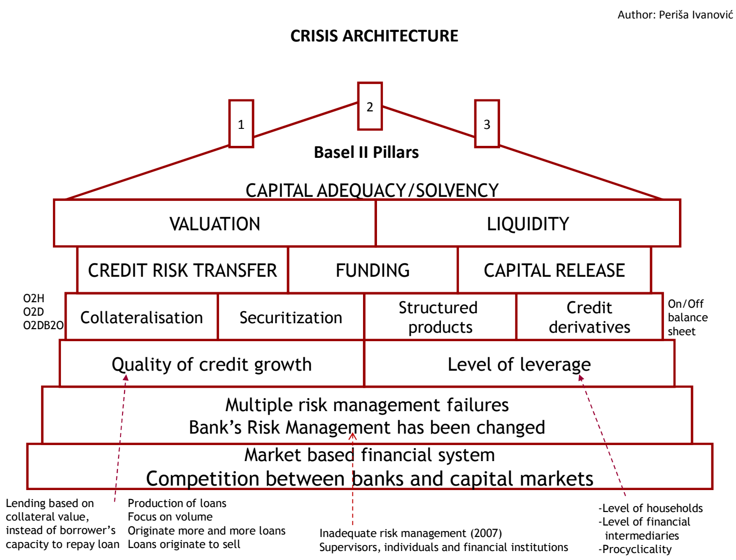
Emergence of vehicular finance (shadow banking)

“The uncertainty stems form changes not just in instruments and markets, but also in institutions – ie in the nature and structure of financial intermediaries. This is the of what I call vehicular finance[10]”. Many leading international banks started/sponsored off balance sheet Structured Investment Vehicles (SIVs) to freely undertake activities which were not possible otherwise because of regulatory norms for banks, like capital adequacy, credit risk management and management of liquidity risks. Once the crisis started, the sponsoring banks had to take the losses of the SIVs. In addition to, banks from advanced economies have registred, licenced and founded financial subsidiaries in emerging countries as domestic financial institutions, but large part of their transactions had involved basic characteristics of shadow banking.

Financial innovations

Earlier, it was not easy to securitise any type of loan, like sub-prime loans, and create a market for them. The financial engineers of the Wall Street, however, found the answer in two things: First, by creating information asymmetry by converting the pool of difficult to market loans into CDO, and second, creating market for different tranches based on “ratings”. Thus, a “AAA” rated CDO could be created out of cash-flows linked to sub-prime loans. “In the post crisis period, some have questioned the relevance of such innovations in any financial market. Innovations need to be encouraged for enhancing market efficiency, but market efficiency cannot be achieved without proper information”[11]. “The significance of financial innovations has been greatly reinforced by changes in valuation methods and the increasingly widespread use of mark-to-market accounting. This has boosted the financial accelerator effect, which is a mechanism whereby the level of asset prices influences the level of credit and then the real economy, which in turn impacts the value of assets. This may be an upward spiral or, as is the case at present, a downward spiral [12]. Picture 1. summarized all abovementioned drivers of global crisis.

Picture 1. Building up the crisis on the global level



[10] Tucker P. (2007): “A perspective on recent monetary and financial system developments”, Bank of England, Quarterly Bulletin, 2007 Q2.
[11] K.C.Chakrabarty (2009): Global crisis – genesis, challenges and opportunities unleashed, inaugural address at the 21st Anniversary Convention of the Association of Professional Bankers, Sri Lanka, Colombo, September 2009.
[12] Banq de France Bulletin Digest, (2007), Financial innovations and the effectiveness of monetary policy, No. 168, December 2007 .

2. What problems have arisen in Serbia in the wake of the crisis?

In Serbia the financial crisis has led to a number of problems:

- The banks have become unwilling to assume counterparty risk by lending money without collateral to other banks, especially at longer maturities.
- The loss of confidence and fear of inflation caused increasing demand for foreign currency and made it difficult to NBS to halt further depreciation of dinar (there was depreciation of 17% during July09/July08).
- The lack of funding in foreign currencies has been a problem even for banks which are subsidiaries of foreign banking conglomerates.
- The banks have become unwilling to assume new credit risk by lending money without collateral to companies and households.
- The households have become to draw their foreign currency desposits from banks as a result of deteriorated confidence and negative experience during the 1990 years (time of abnormal inflation).

National bank of Serbia has been conscious from the beginning that long-term growth cannot rely on domestic demand expansion which permanently generates profound internal and external imbalances, thus increasing general indebtedness. Also, all time NBS was oversighting pro-cyclicality of banks regarding their volume of loans, balance sheets and volume of recapitalisation. Therefore, it has been generally necessary to run anti-cyclicality during 2004-2009. Even now (October 2008 - September 2009), regarding slowing rate of credit growth, NBS is implementing anti-cyclical operations and measures.

“The genesis of this problem is well known from the experience of some other countries where strong foreign capital inflows and credit expansion exerted a powerful influence on goods and services markets, as well as the securities and real state markets”[13]. In the former case, the credit-supported demand for goods and services exceeding the short-term domestic supply capacities was satisfied by stronger import based supply, which led to an increase in the current account deficit, but also helped maintain the relative price stability on these markets (import of deflation). Naturally, this was not the case with the financial markets, where supply was much more restricted so that the growth of demand resulted in a considerable price increase, which finally produced a pure bubble effect. This in fact led to a vicious circle in which credit expansion, supported by optimistic expectations, resulted in an asset price increase, providing an incentive to investors and raising the prices of collateral, which all together further encouraged credit expansion.

Thus, strong credit and investment growth, as well as rising prices of securities and real estate coincided with relatively low inflation measured by the consumer price index, huge inflow of capital through FDI, crossborder finance and funding banks from their groups. As this process was also connected with the real growth of economy, it increased preparedness for taking risks, thus giving further impetus to the credit cycle. Such capital flows also had a strong impact on changes in monetary systems and monetary policies in general, particularly in small, highly euroised economies as it is Serbia. “These policies were no more based on fully endogenous creation of money supply by central banks which, through an interaction with demand, target the general price level, exchange rate and interest rates. In contrast to this “neoclassical” scenario, in an environment of liberalised financial flows, monetary policy, as a kind of a “filter”, has through the interrelationship between relative prices and returns, influenced capital inflows into and outflows from the country's financial system, thus acting as a moderator of the general economic performance”[14].

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[13] Rohatinski Ž. (2009): Economic Crisis and Monetary Policy, Prepared for a round table at the HAZU Department of Social Sciences: Crisis and Economic Policy Frameworks, Zagreb 7 July 2009.

[14] Rohatinski Ž. (2009): Economic Crisis and Monetary Policy, Prepared for a round table at the HAZU Department of Social Sciences: Crisis and Economic Policy Frameworks, Zagreb 7 July 2009.

This capital has its benchmark foreign interest rate and its conversion into the domestic currency has an appreciation effect on the exchange rate. Being aware of all this, the NBS has, for a number of years now, emphasized high risks facing the Serbian economy in the globalised financial system, as well as of internal shocks caused by the processes initiated or supported by foreign capital inflows in an environment of relatively low disposable income and a high propensity to consume in the country.

Therefore, the primary task of the NBS's policy in the previous years was to regulate the inflow of capital into the banking system in such a way that it supports, rather than impedes sustainable economic growth through its unchecked expansion. In doing so, it had to be borne in mind that all large banks in Serbia actually operated as a subsidiaries of financial conglomerates (groups), and as such, they directed the employed foreign capital and alternative forms of domestic savings to the markets, with a view to maximizing returns at the group level.

Under such policy approach, in selecting monetary policy instruments priority was given to those which made the banks' external sources of funds more expensive and limited their credit multiplication (indirectly reduced return on bank capital which is main motive for aggressive credit supply). To this end, the NBS has primarily applied, and gradually tightened, direct influence measures (higher policy rate on account of sterilization of exceeded liquidity; intervention on foreign exchange market; ratio of gross household lending to share capital; ratio of indebtedness of natural persons on their wages/salaries and maintaining of high reserve requirement rate for new fx deposits and loans from abroad), and, complementarily, prudential measures aimed at maximizing the effects and reducing the linearity of direct measures. In spite of all abovementioned problems NBS has successed to maintaing inflation inside targeted range.

Of course, such policy was not readily accepted by banks and very often by some political agents. And not only by them. International financial institutions have precisely anticipated the risks arising from expansionary foreign capital inflow, but have given preference to prudential and market-oriented monetary policy solutions, emphasizing the long-term damages of "administrative" measures. The NBS's ability to resist these pressures at the onset of the global financial crisis had two positive effects. First, NBS's Serbian monetary policy has significantly impeded the growth of credit and foreign debt, and consequently the growth of credit liabilities of the corporate and household sectors, relative to what it might have been without such policy. And second, the application of the "administrative" instruments made it possible to create liquid reserves and higher capital adequacy at the entire banking system level, which served as the necessary shock absorber when the external shock occurred.

3. NBS response to the crisis – building confidence in the long-run: liquidity and capital regulation

The crisis awareness heightened in Serbia (very similar to other countries in region) during October 2008, due primarily to the stock market crash and loss of confidence, and was expected to end in a large-scale financial collapse. However, this was not happened, thanks to a prompt and efficient reaction on the part of the monetary system, based exactly on the principle of anti-cyclicality. At that moment, it was crucial to prevent the loss of saver confidence in the banking system and maintain monetary policy credibility. Without this, the "vicious circle" of the financial crisis would be set in motion[15] and leads to further erosion of confidence. "If confidence for the entire banking sector disappears, a financial crisis is a fact"[16].

All over the world central banks and governments have taken a number of measures to prevent or at least ease the effects of the world financial crisis on the stability of their national financial systems.

[15] This circle has been described by Paul Krugman as the interdependence of three elements causing the loss of confidence — exchange rate depreciation, the growth of interest rates and a slump in demand — which results in financial problems for enterprises, banks and households that lead to further erosion of confidence.

[16] Ingves, S. (2009): A Cure for Crises: Confidence, Confidence and Trust, Speech, Locality: Eurofi Forum, Gothenburg, September 2009.

The NBS is no exception in this respect, especially considering the fact that preserving financial stability is one of its legally mandated objectives[17].

One of the first consequences of the international financial downturn in Serbia was a system-wide loss of confidence[18]. As this was bound to affect domestic financial institutions, the NBS adopted a set of measures to facilitate access to foreign sources of finance. First, the NBS amended its regulations to abolish reserve requirements on foreign borrowing and subordinated credit for banks, as well as reserve requirements on foreign borrowing for leasing providers. This measure was geared at boosting foreign borrowing by making it less costly. To enable banks to make adequate plans for financing their business activities in an environment of global liquidity crunch, in December 2008 the NBS stipulated mid-2010 as the deadline by which the above lifting of reserve requirements shall apply.

In view of the effects of the global crisis, already in December 2008 the NBS adopted a number of amendments to stimulate bank lending and improve the stability of financial institutions in Serbia. Amendments to secondary legislation envisaged non-inclusion of the effects of depreciation in the calculation of the ratio of gross household lending to bank capital, as well as exemption of loans for agricultural production and loans to entrepreneurs from the calculation of this ratio in order to stimulate lending to entrepreneurs. Pursuant to the Decision on Adjusting Gross Household Lending to Share Capital of Banks, the ratio of gross household lending to share capital was raised from 150% to 200%. Depreciation effects were also excluded from the calculation of the ratio of installment to net regular monthly income of the client (30/50% ratio). Hence, banks' receivables on foreign currency indexed loans were not downgraded when this ratio was exceeded due to the effects of depreciation on condition that the client obligations were regularly settled and that he/she was experiencing only temporary repayment difficulties. Another measure for preserving financial stability exempted banks from the obligation to classify receivables unsecured with a 30% deposit into category E. In addition, the reserve for general banking risks, which is normally applied when the annual increase in credit activity exceeds 15% of the bank's risk-weighted assets, was temporarily lifted in December.

Some measures adopted on the basis of amended regulations relate to investment by financial institutions where, on the one hand, scope for investment in high quality products is broadened, and on the other, certain limits are set to improve the quality of such investment so as to ensure additional impetus to liquidity and stability of the financial system in the currently highly turbulent financial environment. First, the National Bank amended regulations governing the operations of insurance companies. These amendments assume higher limits on investment from technical reserves into bank deposits, as well as changes in the criteria to be met by shares to qualify for investment of technical reserves. These measures of the NBS further enhanced the stability of the overall financial system as, among other things, they aim to improve liquidity[19].

Finally, pursuant to amended regulations, indicators of large exposure of banks against parent institution guarantees will be lowered on condition the bank obtains a letter to that effect from the majority of shareholders of the parent institution. However, should a bank fail to ensure such support, it will not be permitted to engage in distribution of profits, other than into capital and reserves during the period of application of lowered foreign currency risk indicator (from 20% to 10%).

In February 2009, National Bank of Serbia initiated agreement among commercial banks to enable clients to overcome temporary difficulties in loan repayment and/or decrease or eliminate their foreign

[17] In addition to its year-long conduct of conservative prudential and monetary policies, the NBS has from the very beginning of financial turmoil kept a close eye on movements in the global financial market

[18] Republic of Serbia like many other countries accepted to guarantee saving accounts up to 50.000 euros.

[19] During the application of the Decision on Temporary Measures for Preserving Financial Stability in the Republic of Serbia banks and other residents from Article 16 of the Law on Foreign Exchange Operations may make payments to purchase financial derivatives abroad, but only for the purpose of hedging against interest, currency and market risks. During the same period, residents from Article 13 of that Law (legal entities, entrepreneurs and natural persons) may make payments to purchase foreign securities other than in the form of direct investment and long-term debt securities issued by OECD countries and international financial institutions.

currency risk exposure. This set of options will remain on offer for a limited period of time and assumes possibility of early loan repayment without payment of penalty fee plus three other options at client request: (1) one year extension of the life of the loan; if extension is requested for cash loans, they must first be converted into dinars, (2) conversion into dinars of foreign currency clause indexed loans, and (3) conversion of CHF indexed loans into EUR indexed loans. The main precondition is that these optional arrangements are conducted in a fair manner, without additional costs and at equal or better conditions to clients who regularly settle their obligations but are experiencing only temporary difficulties. By amending pertinent regulations the NBS has ensured that the extension of the life of the loan does not result in loan downgrading.

The National Bank of Serbia issued a set of additional measures to maintain the quality of bank portfolios under the Financial Stability Support Programme that came into existence as a result of the Vienna Initiative.

Vienna Initiative

Following the successful financial sector coordination meeting on Serbia held in Vienna on 27 March 2009, and in relation to the arrangement with the IMF, the NBS drew up special facilities in support of the country's financial stability with the aim of upholding confidence in the banking sector and preserving financial and macroeconomic stability. The facilities are designed to enable continuous access to sources of dinar and foreign exchange liquidity, stabilise the forex market, maintain the quality of bank assets (pre-emptive measure) by establishing the framework for the rescheduling of loan repayment terms for bank clients, as well as to reduce the outflow of foreign exchange and alleviate depreciation pressures[20].

Special facilities are available to those banks that, together with their majority shareholders, assume certain commitments. The majority shareholders of banks commit to maintain their December 2008 level of exposure to the Republic of Serbia until end 2010 (if their head office is located outside of the Republic of Serbia) and to keep bank capital adequacy and liquidity ratios at the levels prescribed, whereas the NBS will assess the future movements in capital adequacy ratios in accordance with the methodology harmonised with the IMF. Banks, on the other hand, have to commit to enable borrowers to convert their foreign currency loans and foreign currency clause-indexed loans into dinar loans, and to provide for the rescheduling of loan repayment terms under the framework defined.

Banks that meet these conditions gain access to the following facilities: new liquidity sources – dinar loans with a repayment period of no longer than 12 months, and short-term foreign exchange swap transactions, including the abolishment of reserve requirements for deposits and loans received from abroad from October 2008 to December 2010 until their maturity date. Banks can also include in their capital, for regulatory purposes, subordinated liabilities up to 75% of their core capital. Besides, in the calculation of arrears on loans whose repayment terms were rescheduled under the framework defined, and for the purposes of their classification requirements, banks are permitted to apply the subsequently agreed maturity date, as well as to raise foreign exchange risk ratio from 10% to 20% of their capital.

Capital requirements

The crisis has shown that there should be more capital, and more high quality capital, in the banking system, over and above the present regulatory minimum levels. Capital of Serbian banking sector at the end of March 2009 has amounted 432 billion of dinars expressing growth of 18% in terms of same period of last year[21]. Capital adequacy ratio of whole banking industry reached level of 20.8% on the March 2008 (lower for 1.2 bp in terms of December 2008). Very strong recapitalization of banking sector during last 5 years as a result of rigorous requirements by NBS and respond to very aggressive

[20] See: Decision on Special Facilities Supporting the Countr's Financial Stability; Decision on Terms and Conditions of Granting Short Term Dinar Loans to Banks; and Decision on Terms and Conditions of Foreign Exchange Swap Trading between the National Bank of Serbia and Banks

[21] NBS, Financial Stability Report, May 2009. pg.51

lending policy by banks made our banks more resilient to market turbulences. From the end of 2006 to beginning of 2009 the capital of banking sector has been doubled (core capital has grown 85%). All these years NBS has insisted banks to hold more capital, especially in good times (counter-cyclicality), not only to cover idiosyncratic risks but also to incorporate the broader macro-prudential risks (forward looking approach)[22].

4. Opportunities in the post crisis period

Every major crisis exposes the limitations and rigidities of the existing systems, thereby creating compelling pressures on the authorities to reform and restructure. This global financial crisis will provide the trigger for major revamping of the financial stability architectures around the world, besides fostering better governance of the globalization process and recouraging relevant cooperation among national policy makers. The key areas that could strengthen the financial stability architecture, as agreed in the recent G-20 meeting in London, and which National Bank of Serbia intend to follow, include:

- More and better quality capital as the best first line of defence against financial crisis;
- New liquidity rules strengthening base banking principle of confidence;
- Introduction of countercyclical buffers during good times to strengthen resilience during bad times;
- Introduction of leverage ratio as an element of the Basel II framework while further strengthening the risk based capital requirement;
- Consistent and coordinated implementation of international standards, including Basel II, to prevent emergence of new risks and regulatory arbitrage;
- Introduction of Central Counterparties for credit derivatives;
- Oversight of credit ratings agencies and hedge funds;
- Quantitative retention requirements for securitisation;
- Convergence towards a single set of high-quality, global, independent accounting standards on financial instruments, loan-loss provisioning, off-balance sheet exposures and the impairment and valuation of financial assets; and
- Stronger regulation and oversight for systematically important firms ("too big to fail").

5. Conclusion

Central banks around the world have implemented extensive measures to counteract the effects of the financial crisis. In many cases, the same type of extraordinary measures have been used but in some cases, however, the central banks have chosen to take different measures to counteract the effects of the financial crisis in their respective countries. This is due to differences in the structure of the financial sector in the various countries. The NBS's policy in the previous years was to regulate the inflow of capital into the banking system in such a way that it supports, rather than impedes sustainable economic growth (without inflation) through its unchecked expansion. Under such policy approach, in selecting prudential rules and monetary policy instruments, preference was given to those policies which made the bank's external sources of funds more expensive and limited their credit multiplication (and risk aspects), strengthening banking liquidity sources and level of required capital simultaneously. In this sense the NBS's long run anti-cyclical policy has shown as very fruitful in a time of crisis - banking system is liquid and there is no need for recapitalization of banks - confidence is essential for a well-functioning financial system.

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[22] In accordance with Vienna Initiative NBS has performed stress test for 16 banks (the biggest) which amount 83% of total banking assets. If we presume pesimistic scenarios to occure composite capital adequacy ratio will be far above regulatory required level of 12%. Also, through stress test NBS has concluded that there is no need for recapitalization of banks (neither extraordinary nor preventive recapitalizations).

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